AMENDMENTS TO THE SPECIFICATION 26

Please amend the paragraph on page 10 lines 19-~~36~~ as follows: MJD 8/23/06

Fig. 3 shows the basic steps generally indicated as 46 performed by the processor 24 in Fig. 1, including a step 48 for performing an FFT of pressure signals $P_1(t)$ - $P_N(t)$; a step 50 for determining power of the pressure signals in a K-ω plane; a step 52 for determining a convective ridge in the K-ω plane; a step 54 for calculating velocity of flow (Uc(t)) ~~(Vc(t))~~ and/or volumetric flow (U_F)~~(VF)~~; and a step 62 for calibrating the velocity of flow ~~(Vc(t)~~ (Uc(t) and/or volumetric flow (U_F). ~~(VF).~~ The step 48 is performed by the FFT modules 30-33; the steps 50, 52, 54 are performed by the array processor 36 and the step 62 is performed by the calibration correction function module 38.

Please amend the paragraph on page 12 lines 16-21 as follows:

Fig. 4 shows an example of a K-ω plot generated from a phased array of pressure sensors 18-21. The power contours show a well-defined convective ridge. A parametric optimization method was used to determine the "best" line representing the slope of the convective ridge 200. For this case, a slope of ~~14.2 ft/sec~~ 14 ft/sec was determined. The intermediate result of the optimization procedure is displayed in the insert, showing that optimized value is a unique and well-defined optima.